



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/825,622

04/15/2004

Sean Allen Johnson

SVL920040562US2

7882

55070

7590

03/21/2008

INTERNATIONAL BUSINESS MACHINES CORP.

IP LAW

555 BAILEY AVENUE, J46/G4

SAN JOSE, CA 95141

EXAMINER

JOHNSON, JOHNESE T

ART UNIT

PAPER NUMBER

2166

MAIL DATE

DELIVERY MODE

03/21/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/825,622	<b>Applicant(s)</b> JOHNSON ET AL.	
	<b>Examiner</b> Johnese Johnson	<b>Art Unit</b> 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13, 24-27, 29-32, 39-45, 48, 50 and 52-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 24-27, 29-32, 39-45, 48, 50, and 52-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1-7-2008, 2-19-2008</u> .                                     | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Remarks***

1. In response to the Amendment filed on 17 December 2007, claims 1-13, 24-27, 29-32, 39-45, 48, and 50 are pending in this application. Claims 14-23, 28, 33-38, 46, 47, 49, and 51 are cancelled. Claims 52-58 are newly added.
2. The claim objection(s) are overcome by the amendment(s).
3. The rejections under 35 USC 101 and 35 USC 112 2<sup>nd</sup> are overcome by the amendments. The rejections under 35 USC 112 1<sup>st</sup> are maintained.

### ***Claim Objections***

4. Claim 24 is objected to because of the following informalities: claim 24 lacks antecedent basis. The claim references "the first software". A first software is not recited in previous claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-13, 24-27, 29-32, 39-45, 48, and 50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

On page 5 of applicant's specification, the components of the software system "... comprises four modules..." that can be used to create various structures or complete various tasks. On page 7, the system is comprised of nodes which appear to be links or URLs to link or refer to a content item in a workflow system. On page 8, a workflow system is referenced. On pages 5-6, 8-12, 17, and 19-20, an API is referenced. Although the specification gives examples of what the API does, it never clearly defines the API. It is unclear to the examiner as to what are the actual components of the system.

With respect to the nodes of the system, there are inconsistencies in the nodes exact definition. On page 7 of applicant's specification, "each node can be one of many types including a link to a folder in a content repository, link to content,...". However, on page 12 of applicant's specification, "A node is generally either an entity defined by unique subject identifier or is a piece of external information defined by a unique subject address that can be resolved with a locator". The examiner is not sure if the node is an actual entity/ content or just a link to the content.

Lastly, how do all of these parts or "components" of the system function together? The specification merely discloses descriptions of the various parts or

“components” but it fails to disclose how the nodes, workflow systems , etc..., work together to accomplish real-time delivery from disparate content repositories.

There simply isn't enough support in the specification to run this “system”. One of ordinary skill in the art would not know how to create or use the invention absent further description.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-9, 11, 24-31, and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by Hobbs (US Pat. No. 6,523,022).

As to claims 1 and 48, Hobbs discloses:

a processing unit (see col. 12, lines 45-46); and

a memory (see col. 9, line 61) comprising:

a virtual repository comprising a plurality of nodes, a first node of the plurality of nodes linking to a work item of a first workflow system of the plurality of workflow systems, a second node of the plurality of nodes linking to a work item of a second

workflow system of the plurality of workflow systems, a third node of the plurality of nodes linking to a work organizing structure of the first workflow system, a fourth node of the plurality of nodes linking to a work organizing structure of the second workflow system (see col. 1, lines 20-42; wherein the plurality of links in which the examiner is interpreting as nodes, are linked to content within the data warehouse which is used to manage the multimedia content), a fifth node of the plurality of nodes linking to a content of a first content repository of said plurality of disparate content repositories (see col. 1, lines 20-42; wherein the data warehouse is composed of databases with links to content), a sixth node of the plurality of nodes linking to a content of a second content repository of said plurality of disparate content repositories (see col. 1, lines 20-42; and see col. 4, lines 19-20; different i.e. disparate data warehouses), a seventh node of the plurality of nodes linking to a content organizing structure of the first content repository, and an eighth node of the plurality of nodes linking to a content organizing structure of the second content repository (see col. 1, lines 20-42; wherein the data warehouse is composed of databases which are data organizing structures with links to content), wherein the API provides access to the virtual repository (see col. 21. lines 41-50), wherein the work organizing structure of the first workflow system is one of: a queue and a task list, wherein the work organizing structure of the second workflow system is one of: another queue and another task list (see col. 8, lines 18-34), wherein the content organizing structure of the first content repository is a folder, wherein the content organizing structure of the second content repository is another folder, the virtual

repository also comprising at least one virtual folder, wherein each said at least one virtual folder is also a node of said plurality of nodes, wherein said first node, said second node, said third node, said fourth node, said fifth node, said sixth node, said seventh node and said eighth node are organized via said at least one virtual folder; and

an application programming interface (API), executable by said processing unit, to interface with a software application to provide access to the virtual repository, wherein said at least one virtual folder is accessed via said API (see col. 7, line 1 and col. 28, lines 13-26);

wherein said work item of said first workflow system is accessed via said first node, said work item of said second workflow system is accessed via said second node, said work organizing structure of said first workflow system is accessed via said third node, said work organizing structure of said second workflow system is accessed via said fourth node system (see col. 1, lines 20-42; wherein the plurality of links in which the examiner is interpreting as nodes, are linked to content within the data warehouse which is used to manage the multimedia content), said first content repository is accessed via said fifth node (see col. 1, lines 20-42; wherein the data warehouse is composed of databases with links to content), said content of said second content repository is accessed via said sixth node (see col. 1, lines 20-42; and see col. 4, lines 19-20; different i.e. disparate data warehouses), said content organizing structure of said first content repository is accessed via said seventh node, and said content organizing structure of said second content repository is

accessed via said eighth node (see col. 1, lines 20-42; wherein the data warehouse is composed of databases which are data organizing structures with links to content).

As to claim 2, Hobbs discloses:

wherein the content, content organizing structures, work items, and/or work organizing structures are not replicated or impacted by the creation of the at least one virtual repository (see col. 4, lines 19-22; wherein the repositories are completely different).

As to claim 3, Hobbs discloses:

wherein the existing organization, functions, indexing, and security of the content, content organizing structures, work items, and/or work organizing structures are not impacted by the creation of the at least one virtual repository (see col. 4, lines 19-22; wherein the repositories are completely different so nothing is affected).

As to claims 4 and 25, Hobbs discloses:

wherein the API is in a format selected from the group consisting of Java, Component Object Model (COM), Simple Object Protocol (SOAP) Web Services, Representational State Transfer (REST) Web Services, and Web Development Components (see col. 14, lines 10-11).

As to claim 5, Hobbs disclose:



a graphical user interface or a web-based interface (see figure 8).

As to claims 6 and 26, Hobbs discloses:

wherein the nodes are arranged in a parent-child hierarchy (see col. 20, lines 17-27; directory).

As to claim 7, Hobbs discloses:

Wherein at least one virtual folder, is at least one ninth node, respectively (see col. 20, lines 17-27; link to a directory), said at least one virtual folder further comprises:

a tenth node being of the type of a link to a folder populated by saved repository search (see col. 5, lines 13-15; wherein the results of the search are saved an a link delivered to the user's email),

an eleventh node being of a type of a link to a folder populated by a workflow system search (see col. 11, lines 40-52), and

a twelfth node being of a type of a link to an external resource via a URL (see col. 15, lines 46-48).

As to claim 8, Hobbs discloses:

wherein the nodes contain meta-data properties in addition to the meta-data maintained in their respective underlying said content repositories and said workflow systems, wherein the meta-data properties of the nodes describe a use of the content, content organizing structures, work items and work organizing structures of the virtual repository

Art Unit: 2165

(see col. 1, lines 20-42 and see col. 2, lines 48-50 – information, i.e. meta-data, describing the content).

As to claim 9, Hobbs discloses:

wherein the first content repository of the plurality of content repositories has first-content-repository access control rules to the content and the content organizing structure, wherein the first workflow system of the plurality of workflow systems has first workflow access control rules to the first work item and the first work organizing structure, wherein the nodes of the virtual repository comprise supplemental access control rules of the virtual repository, wherein the supplemental access control rules are applied to the nodes within the virtual repository, wherein the supplemental access control rules describe supplemental security constraints to the content and content organizing structures of the first content repository, wherein the supplemental access control rules describe security constraints to the work items and work organizing structures of the first workflow system (see Col. 28, lines 42-47; wherein access control is provided to the various data warehouses and databases)

wherein the content of the first content repository is accessed in accordance with the supplemental access control rules of the virtual repository and the first-content-repository access control rules of the first content repository (see Col. 28, lines 42-47; wherein access control is provided to the various data warehouses and databases), wherein the first work item of the first workflow system is accessed in accordance with the supplemental access control rules of the virtual repository and the first-workflow

Art Unit: 2165

access control rules of the first workflow system (see Col. 28, lines 42-47; wherein access control is provided to the various data warehouses and databases).

As to claim 11, Hobbs discloses:

further comprising a middleware platform to abstract a particular content repository of the plurality of content repositories of the virtual repository, and another middleware platform to abstract a particular workflow system of the plurality of workflow systems of the virtual repository. (see col. 14, lines 59-64).

As to claims 24 and 50, Hobbs discloses:

a processing unit (see col. 12, lines 45-46); and

a memory (see col. 9, line 61) comprising:

providing a module comprising an application program interface (API),

executable by said processing unit, to interface with a software application to a module (see col. 7, line 1 and col. 28, lines 13-26); and

a virtual repository comprising a plurality of nodes, created using the first software, a first node of the plurality of nodes linking to a first work item of a first workflow system of the plurality of workflow systems, a second node of the plurality of nodes linking to a second work item of a second workflow system of the plurality of workflow systems, a third node of the plurality of nodes linking to a first work organizing structure of the first workflow system, a fourth node of the plurality of nodes linking to a second work organizing structure of the second workflow system

(see col. 1, lines 20-42; wherein the plurality of links in which the examiner is interpreting as nodes, are linked to content within the data warehouse which is used to manage the multimedia content), a fifth node of the plurality of nodes linking to a first content of a first content repository of said plurality of disparate content repositories (see col. 1, lines 20-42; wherein the data warehouse is composed of databases with links to content), a sixth node of the plurality of nodes linking to a second content of a second content repository of said plurality of disparate content repositories (see col. 1, lines 20-42; and see col. 4, lines 19-20; different i.e. disparate data warehouses), a seventh node of the plurality of nodes linking to a first content organizing structure of the first content repository, and an eighth node of the plurality of nodes linking to a second content organizing structure of the second content repository (see col. 1, lines 20-42; wherein the data warehouse is composed of databases which are data organizing structures with links to content), wherein the API provides access to the virtual repository (see col. 21, lines 41-50), wherein the work organizing structure of the first workflow system is one of: a queue and a task list, wherein the work organizing structure of the second workflow system is one of: another queue and another task list (see col. 8, lines 18-34), wherein the content organizing structure of the first content repository is a folder, wherein the content organizing structure of the second content repository is another folder (see col. 20, lines 17-27).

a plurality of associations created using the first software, describing relationships between the nodes, each association of said plurality of associations having at least

two nodes of the plurality of nodes that are members of said each association, said each association describing a relationship between the members of that association, said each association also being a node (see col. 20, lines 17-27; wherein the content in the directory is associated by links) of the plurality of nodes (see col. 1, lines 20-42; wherein the plurality of links in which the examiner is interpreting as nodes, are linked to content within the data warehouse which is used to manage the multimedia content), wherein said first, second, third, fourth, fifth, sixth, seventh, and eighth nodes are members of at least one association of the plurality of associations (see col. 20, lines 17-27; wherein the content in the directory is associated by links), wherein said first node linking to said first work item of said first workflow system and said fifth node linking to said first content of said first content repository are related via at least one particular association of said plurality of associations (see col. 20, lines 17-27; wherein the content in the directory is associated by links); and

a plurality of locators to reference and de-reference entities external to the first module (see col. 15, lines 46-48), said first plurality of locators comprising a first locator to a first external entity, the first external entity being said first work item of said first workflow system, the first locator leverages workflow integration middleware to reference said first work item of said first workflow system; a second locator to a second external entity, said second external entity being said second work item of said second workflow system, the second locator leverages said workflow integration middleware to reference said second work item of said second workflow system; a third locator to a third external entity, the third external entity

being the first work organizing structure of said first workflow system, the third locator leverages said workflow integration middleware to reference said first work organizing structure of said first workflow system, a fourth locator, the fourth external entity being said second work organizing structure of said second workflow system, leverages said workflow integration middleware to reference said second work organizing structure of said second workflow system, to reference said work organizing structure of said second workflow system; a fifth locator to a fifth external entity, the fifth external entity being said first content of said first content repository, the fifth locator leverages content integration middleware to reference said content of said first content repository; a sixth locator to a sixth external entity, the sixth external entity being said second content of said second content repository, the sixth locator leverages said content integration middleware to reference said second content of said second content repository; a seventh locator to a seventh external entity, the seventh external entity being said first content organizing structure of said first content repository, the seventh locator leverages said content integration middleware to reference said first content organizing structure of said first content repository; an eighth locator to an eighth external entity, the eighth external entity being said second content organizing structure of said second content repository, the eighth locator leverages said content integration middleware to reference said second content organizing structure of said second content repository; and an extensible locator interface to provide [[a]] at least one additional locator to another external information source system; said module providing access to said entities via

said API, wherein said first work item of said first workflow system via said first node, said first locator and said workflow integration middleware; said second work item of said second workflow system is accessed via said second node, said second locator and said workflow integration middleware; said first work organizing structure of said first workflow system is accessed via said third node, said third locator and said workflow integration middleware; said second work organizing structure of said second workflow system is accessed via said fourth node, said fourth locator and said workflow integration middleware; said first content of said first content repository is accessed via said fifth node, said fifth locator and said content integration middleware; said second content of said second content repository is accessed via said sixth node, said sixth locator and said content integration middleware; said first content organizing structure of said first content repository is accessed via said seventh node, said seventh locator and said content integration middleware; said second content organizing structure of said second content repository is accessed via said eighth node, said eighth locator and said content integration middleware (see col. 14, lines 59-64; leverages middle ware and see col. 1, lines 20-42; wherein the data warehouse is composed of databases which are data organizing structures with links to content).

As to claim 27, Hobbs discloses:

wherein said first node represents said first work item, said second node represents said second work item, said third node represents said first work organizing structure,

Art Unit: 2165

said fourth node represents said second work organizing structure, said fifth node represents said first content, said sixth node represents said second content, said seventh node represents said first content organizing structure, and said eighth node represents said second content organization structure, the plurality of nodes represent content, content organizing structures, work items and work organizing structures that will participate said first, second, third, fourth, fifth, sixth, seventh and eighth nodes participating in said relationships with information, said information for each node of the plurality of said first, second, third, fourth, fifth, sixth, seventh and eighth nodes comprising at least one of: meta-data describing said each node, at least one role played in at least one association of said plurality of associations with another node, zero or more scoped names, a unique identifier of the subject of said each node, and 0 or more node types. (see col. 2, lines 48-50 – information, i.e. meta-data, describing the content).

As to claim 29, Hobbs discloses:

wherein said each association of said plurality of associations has at least two of said members that are nodes playing a specific named role in said each association (see col. 2, line 57 – database content; wherein database contents have links which are entities and entities have specific roles and relationships).

As to claim 30, Hobbs discloses:

wherein members represent the specific role a node plays in an association.



Art Unit: 2165

(see col. 2, line 57 – database content; wherein database contents have links which are entities and entities have specific roles and relationships).

As to claim 31, Hobbs discloses:

wherein members have a player specifying the node playing the role in the association

(see col. 2, line 57 – database content; wherein database contents have links which are entities and entities have specific roles and relationships and wherein relationships comprise members of nodes and their roles).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobbs (US Pat. No. 6,523,022) and in view of Michaelides (U.S. Pub. No. 2004/0181753).

As to claim 12, Hobbs does not explicitly disclose:

further comprising a set of adaptors to allow the system to access specific content repositories and/or workflow systems.

However, Michaelides discloses:

Art Unit: 2165

further comprising a set of adaptors to allow the system to access specific content repositories and/or workflow systems (see paragraph [0004, line 4 – set of adaptors for applications]).

It would have been obvious, at the time of the invention, having teachings of Hobbs and Michaelides before him/her, to combine the features as disclosed by Hobbs with the features as disclosed by Michaelides to facilitate integration between applications, systems, and processes (see Michaelides, paragraph [0002], lines 4-5).

As to claim 13, Hobbs does not explicitly disclose:

further comprising an adaptor toolkit that enables the system to build interfaces to future developed content repositories and/or workflow systems.

However, Michaelides discloses:

further comprising an adaptor toolkit that enables the system to build interfaces to future developed content repositories and/or workflow systems (see paragraph [0004], lines 10-11).

It would have been obvious, at the time of the invention, having teachings of Hobbs and Michaelides before him/her, to combine the features as disclosed by Hobbs with the features as disclosed by Michaelides to facilitate integration between applications, systems, and processes (see Michaelides, paragraph [0002], lines 4-5).

Art Unit: 2165

11. Claims 32 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobbs (US Pat. No. 6,523,022) and in view of Brunner et al. (U.S. Pat. No. 5,550,971).

As to claim 32, Hobbs does not explicitly disclose:

wherein the associations have 0 or more association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties comprise at least one of: an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship.

However, Brunner et al. disclose:

wherein the associations have 0 or more association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties comprise at least one of: an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship (see col. 5, lines 66-67 and col. 6, line 1 - 3).

It would have been obvious, at the time of the invention, having teachings of Hobbs and Brunner et al. before him/her, to combine the features as disclosed by Hobbs with the features as disclosed by Brunner et al. to facilitate the generation of a

Art Unit: 2165

user interface that is adaptable to various database systems (see Brunner et al., col. 2, lines 46-48).

As to claim 58, Hobbs does not explicitly disclose:

wherein the associations have association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties comprise an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship.

However, Brunner et al. disclose:

wherein the associations have association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties comprise an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship (see col. 5, lines 66-67 and col. 6, line 1 - 3).

It would have been obvious, at the time of the invention, having teachings of Hobbs and Brunner et al. before him/her, to combine the features as disclosed by Hobbs with the features as disclosed by Brunner et al. to facilitate the generation of a user interface that is adaptable to various database systems (see Brunner et al., col. 2, lines 46-48).

Art Unit: 2165

12. Claims 39-44 and 52-57 are rejected under 35 U.S.C. 103(a) as being obvious over Hobbs (US Pat. No. 6,523,022) and in view of Armstrong et al. (U.S. Pat. No. 6,279,046).

As to claim 39, Hobbs discloses:

a processor (see col. 1, line 47); and

a memory (see col. 9, line 61) comprising:

an application program interface (API), executable by said processor, to interface with a software application (see col. 7, line 1); and

a plurality of subscriptions to a plurality of subscribed-to-items, respectively, wherein the module API interfaces to the software application to create the plurality of subscriptions; the subscribed-to-items comprising a first content of a first content repository, a first content organizing structure of the first content repository, a first work item of a first workflow system, a first work organizing structure of the first workflow system, a second content of a second content repository, a second content organizing structure of the second content repository, a second work item of a second workflow system, a second work organizing structure of the second workflow system ( see col. 2, lines 33-36);

wherein the subscriptions are requests to track when at least one of an addition, change and delete occurs to any of the subscribed-to-items, respectively (see col. 5, lines 37-39); and

However, Hobbs does not explicitly disclose:

an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the subscriptions in response to the timer, a content monitor that detects change based on the events, an event filter that filters uninteresting change and interesting change, based on the change detected by the content monitor, and an event handler that receives the interesting change, wherein the software application configures the event path via the module API.

Armstrong et al. discloses:

an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the subscriptions in response to the timer, a content monitor that detects change based on the events, an event filter that filters uninteresting change and interesting change, based on the change detected by the content monitor, and an event handler that receives the interesting change, wherein the software application configures the event path via the module API. (see col. 8, line 41).

It would have been obvious, at the time of the invention, having teachings of Hobbs. and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs. with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 40, Hobbs. , do not explicitly disclose:

Art Unit: 2165

wherein the timer initiates periodic polling of at least one of the first and second content repositories and the first and second workflow systems to detect a change that needs notification.

However, Armstrong et al. discloses:

wherein the timer initiates periodic polling of at least one of the first and second content repositories and the first and second workflow systems to detect a change that needs notification (see col. 11, lines 61-65).

It would have been obvious, at the time of the invention, having teachings of Hobbs. and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs. with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 41, Hobbs. , do not explicitly disclose:

wherein the group processor initiates the events on subscriptions of a subscription group.

However, Armstrong et al. discloses:

wherein the group processor initiates the events on subscriptions of a subscription group (see col. 11, lines 59-61).

It would have been obvious, at the time of the invention, having teachings of Hobbs. and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs. with the features as disclosed by Armstrong et al. to provide an event-driven

Art Unit: 2165

communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 42, Hobbs. , do not explicitly disclose:

wherein the content monitor comprises a plug-in software module for detect the change in subscribed-to items.

However, Armstrong et al. discloses:

wherein the content monitor comprises a plug-in software module for detect the change in subscribed-to (monitored) items (see col. 8, lines 5-10; wherein changes are tracked for those items that are monitored).

It would have been obvious, at the time of the invention, having teachings of Hobbs. and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs. with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 43, Hobbs. , do not explicitly disclose:

wherein the event filter comprises at least one plug-in module for filtering interesting and plug-in modules that filters the interesting and uninteresting change in the subscribed-to-items, based on a meta-data value of at least one of the subscribed-to-items.

However, Armstrong et al. discloses:



Art Unit: 2165

wherein the event filter comprises at least one plug-in module for filtering interesting and plug-in modules that filters the interesting and uninteresting change in the subscribed-to-items, based on a meta-data value of at least one of the subscribed-to-items (see col. 11, lines ; wherein the event is processed before it reaches the target object (i.e. filtered by the filtering module based on data about the item).

It would have been obvious, at the time of the invention, having teachings of Hobbs. and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs. with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 44, Hobbs. , do not explicitly disclose:

wherein a subscription context is made available to the content monitor, event filter and event with access selected from at least one of:

access to a live content integration middleware session, access to a live workflow integration middleware session, access to a statistics reporting API, access to an error reporting API, access to a logging API, and access to the active subscription.

However, Armstrong et al. discloses:

wherein a subscription context is made available to the content monitor, event filter and event with access selected from at least one of:

access to a live content integration middleware session, access to a live

Art Unit: 2165

workflow integration middleware session, access to a statistics reporting API, access to an error reporting API, access to a logging API, and access to the active subscription (see col. 5, lines 65-67 - col. 6, line 1 and col.

7, lines 61-64; wherein an event handler sends an acknowledgement in the form of a subscription).

It would have been obvious, at the time of the invention, having teachings of Hobbs. and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs. with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 52, Hobbs. , do not explicitly disclose:

wherein each subscription of the subscriptions is stored with at least one of: meta-data describing said each subscription, encrypted user credentials, a representation of a state of a subscribed-to-item of said each subscription, and a membership in a logical subscription group.

However, Armstrong et al. discloses:

wherein each subscription of the subscriptions is stored with at least one of: meta-data describing said each subscription, encrypted user credentials, a representation of a state of a subscribed-to-item of said each subscription, and a membership in a logical subscription group (see col.8, lines 1-15).

Art Unit: 2165

It would have been obvious, at the time of the invention, having teachings of Hobbs and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 53, Hobbs, as modified, discloses:

wherein the API is in a format selected from the group consisting of Java, Component Object Model (COM), Simple Object Protocol (SOAP) Web Services, Representational State Transfer (REST) Web Services, and Web Development Components (see Hobbs col. 14, lines 10-11).

As to claim 54, Hobbs, as modified, discloses:

a graphical user interface or a web-based interface (see Hobbs figure 8).

As to claim 55, Hobbs, do not explicitly disclose:

wherein at least two of the subscriptions with a common polling interval are organized into a logical group.

However, Armstrong et al. discloses:

wherein at least two of the subscriptions with a common polling interval (see col. 11, lines 61-65). are organized into a logical group (see col.8, lines 1-15).

Art Unit: 2165

It would have been obvious, at the time of the invention, having teachings of Hobbs and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 56, Hobbs , do not explicitly disclose:

wherein at least two of the subscriptions with a common event path are organized into a logical group.

However, Armstrong et al. discloses:

wherein at least two of the subscriptions with a common event path (see col. 8, line 41) are organized into a logical group (see col.8, lines 1-15).

It would have been obvious, at the time of the invention, having teachings of Hobbs and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 57, Hobbs discloses:

providing a module application program interface (API) to interface with a software application (see col. 7, line 1 and col. 28, lines 13-26);

However, Hobbs does not explicitly disclose:

Art Unit: 2165

creating, via the module API, a plurality of subscriptions to a plurality of subscribed-to-items, respectively, the subscribed-to-items comprising a first content of a first content repository, a first content organizing structure of the first content repository, a first work item of a first workflow system, a first work organizing structure of the first workflow system, a second content of a second content repository, a second content organizing structure of the second content repository, a second work item of a second workflow system, a second work organizing structure of the second workflow system;

wherein the subscriptions are requests to track when at least one of an addition, change and delete occurs to any of the subscribed-to-items, respectively ;

configuring, via the module API, an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the subscriptions in response to the timer, a content monitor that detects change based on the events, an event filter that filters uninteresting change and interesting change based on the change detected by the content monitor; and

receiving, by the event handler, the interesting change.

Armstrong discloses:

creating, via the module API, a plurality of subscriptions to a plurality of subscribed-to-items, respectively, the subscribed-to-items comprising a first content of a first content repository, a first content organizing structure of the first content repository, a first work item of a first workflow system, a first work organizing structure of the first workflow system, a second content of a second content repository, a second content organizing structure of the second content repository, a second work item of a second workflow

Art Unit: 2165

system, a second work organizing structure of the second workflow system (see col. 11, lines ; wherein the event is processed before it reaches the target object (i.e. filtered by the filtering module based on data about the item);

wherein the subscriptions are requests to track when at least one of an addition, change and delete occurs to any of the subscribed-to-items, respectively (see col. 5, lines 37-39); configuring, via the module API, an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the subscriptions in response to the timer, a content monitor that detects change based on the events (see col. 8, line 41), an event filter that filters uninteresting change and interesting change based on the change detected by the content monitor ; and receiving, by the event handler, the interesting change see col. 11, lines ; wherein the event is processed before it reaches the target object (i.e. filtered by the filtering module based on data about the item).

13. Claim 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobbs (US Pat. No. 6,523,022) in view of Armstrong et al. (U.S. Pat. No. 6, 279, 046) in view of Zintel et al. (U.S. PG. Pub. No. 2002/0029256) and further in view of Mobley et al. (U.S. Pat. No. 5,708,963).

As to claim 45, Zintel et al. do not explicitly disclose:

further comprising a statistics module for gathering runtime statistics on the events passing through the event path and displaying said statistics.

However, Mobley et al. disclose:

further comprising a statistics module for gathering runtime statistics on the events passing through the event path and displaying said statistics (see col. 11, lines 60-62; wherein the decoder has a statistics module).

It would have been obvious, at the time of the invention, having teachings of Hobbs, Armstrong et al., Zintel et al. and Mobley et al. before him/her, to combine the features as disclosed by Hobbs, Armstrong et al. and Zintel et al. with the features as disclosed by Mobley et al. to provide an efficient, reliable return path for returning data from a subscriber location to a service originator in a direct-to-home subscription information delivery service system (see Mobley et al. col. 6, lines 22-25).

### ***Response to Arguments***

14. Applicant's arguments filed 12-17-2007 have been fully considered but they are not persuasive.

Applicant's argument that Hobbs does not disclose, "a virtual repository comprising at least one virtual folder organizing nodes", is acknowledged but is not deemed persuasive.

According to the examiner's interpretation, a virtual repository is nothing more than a database or data warehouse, neither of which are physical but is realized via in software which makes it virtual. The virtual folder organizing nodes is just grouped links to contents. Based on the interpretation, Hobbs does disclose "a virtual repository comprising at least one virtual folder organizing nodes" (see col. 1, lines 20-42).

As to applicant's arguments that Hobbs does not teach a work item or a work organizing structure of a workflow system, these arguments are acknowledged but are not deemed persuasive.

Hobbs teaches, according to the examiner's interpretation, (see col. 1, lines 20-42; wherein the plurality of links in which the examiner is interpreting as nodes, are linked to content or "work items" within the data warehouse or "work organizing structure" which is used to manage the multimedia content).

As to applicant's arguments that Hobbs does not teach a first or second workflow system, based on the examiner's interpretation (from the argument above), Hobbs teaches several data warehouses which are content (or "work") organizing structures (col. 22, line 16).

Applicant continues to argue that Hobbs does not teach "supplemental access control rules of a virtual repository". This argument is indeed acknowledged but is not deemed persuasive.

First, what exactly are these "supplemental rules"? Second, Hobbs discloses access control rules. In Col. 28, lines 42-47, Hobbs teaches permitting access to the data warehouse through encryption (which is supplemental) in addition to passwords (col. 18, line 61) (which is required).



Regarding applicant's arguments that Hobbs does not teach, a virtual repository comprising a plurality of nodes, the argument is acknowledged but is not persuasive.

The examiner interprets the virtual repository to be a database or data warehouse. The data warehouse which is comprised of a plurality of databases houses a plurality of nodes or links to content. I mean, the applicant admits that term "nodes" don't have a set definition and can be anything, (see applicant's argument's pages 22-23 of the remarks). Furthermore, applicant further breaks it down to say that the nodes are (according to the specification, page 7, lines 2-8), that links are URLs and Hobbs discloses just that (see col. 1, lines 20-42; wherein the plurality of links in which the examiner is interpreting as nodes, are linked to content within the data warehouse which is used to manage the multimedia content).

As to applicant's argument that Hobbs does not teach "creating a plurality of associations using the first software, etc..." (page 36 of the remarks), this argument is acknowledged but is not deemed to be persuasive.

The examiner has interpreted this limitation to mean that the content in the data warehouse is associated or related by links or URLs. These links and URLs point from content to content (see col. 20, lines 17-27). These associations are created by the database/ data warehouse software. The plurality of nodes, i.e., sixth, eight, etc... are just the links or URLs. In addition, the applicant's claims do not teach a first software although it is referenced in this claim. It lacks antecedent basis as stated above.

As to applicant's arguments that Hobbs does not disclose "that said first node linking to said first work item of said first workflow system and said first content of said first content repository are related via at least one particular association of said plurality of associations and an association between content in a content repository and a work item of a workflow system." This argument is acknowledged but is not deemed persuasive.

According to the examiner's interpretation (as stated above in previous arguments), Hobbs does teach these limitations.

As to the applicant's argument that Michaelides, Johnson, and Armstrong do not remedy the deficiencies of Hobbs, as argued above, this argument is acknowledged but is not deemed persuasive.

Hobbs is not deficient of any of the above argued limitations. Furthermore, Michaelides, Johnson, and Armstrong are not recited to address additional limitations.

Applicant continues to argue that Brunner does not teach "wherein the associations have 0 or more association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties comprise at least one of: an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship." This argument is acknowledged but is not deemed persuasive.

The examiner disagrees in that , according to the examiner's interpretation, Brunner discloses associations that have 0 or more types and the types have data indicating objects that are allowed as members in the relationship (see col. 5, lines 66-67 and col. 6, line 1 - 3).

As to applicant's arguments that Armstrong et al does not disclose the subscriptions and events based on content and content organizing structures of content repositories and work items and work organizing structures of workflow systems. This argument is acknowledged but is not deemed persuasive.

Armstrong et al clearly discloses subscriptions (see col. 8, line 5) and he also discloses, according to the examiner's interpretation, events arising from storage and content or applications within the storage (see col. 6, lines 27-35).

As to applicant's argument that Armstrong et al. does not teach "a filter that filters interesting and uninteresting changes in events based on changes in content repositories", this argument is acknowledged but is not deemed persuasive.

Armstrong et al. does disclose a partition manager that receives the changes via events from one logical partition and sends appropriate events to appropriate targets (see col. 5, lines 60-61) and these events are based on the logical partitions in storage (see col. 8, lines 33-45).

Applicant argues that Armstrong et al. does not teach “an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the subscriptions in response to the timer, a content monitor that detects change based on the events, an event filter that filters uninteresting change and interesting change, and an event handler that receives the interesting change”. This argument is acknowledged but is not deemed persuasive.

According to the examiner’s interpretation, this means that there is an event path defined for each logical partition and the path contains a timer and that subscriptions are created based on events in response to polling, a monitor that detects events and directs appropriate event to the appropriate logical partition, and an event handler that receives changes. Based on this interpretation, Armstrong et al. does disclose “an event path defined per a logical group comprising a timer (see col. 15, lines 40-44 and cols. 4, lines 5-8), a subscription group processor that creates events based on the subscriptions in response to the timer (see col. 5, lines 62-65), a content monitor that detects change based on the events, an event filter that filters uninteresting change and interesting change (see col. 5, lines 60-61), and an event handler that receives the interesting change (see col. 5, line 66)”.

In regards to applicant’s arguments concerning the rejection made under 112 1<sup>st</sup> paragraph, in that Figure 1 and page 7, lines 1-8 provide support for claim 1, these arguments are acknowledged but are not deemed persuasive.

The claims still fail to comply with the enablement requirement. Figure 1 shows repositories containing folders, workflow systems and , pointers from virtual folders to repositories and workflow systems ; while claim 1 states that repository is virtual and it comprises at least one virtual folder. Claim 1 also teaches APIs. There is nothing in figure 1 regarding an API. Nor does figure 1 remotely teach an workflow system accessed by first "node" or any node. Figure 1 and claim 1 are not equivalent. Again, page 7 discloses a parent child hierarchy of nodes and claim 1 makes not mention of the parent child relationship, only a plurality of nodes that some how permit access to various data structures. Page 7 also makes mention of a link to a specific or latest version of a repository which is not reflected in claim 1. This page does not teach the same thing as claim 1.

In regards to applicant's argument that Claims 1 and 10 disclose and API and that this API is clearly defined. This argument is acknowledged but is not at all deemed persuasive.

Yes, the applicant has defined an API in the specification, however, the applicant has failed to define what makes this API novel and distinct from what is already in use today (since applicant is claiming said API in claims 1 and 10, etc...). The examiner is looking for distinguishing features to ascertain novelty. This distinction should be clearly recited in the claim(s).

Applicant continues to argue that the definitions for nodes in the specification are consistent. The examiner acknowledges this argument but it is not deemed persuasive.

The applicant argues “ The rejection asserts that there are inconsistencies in the nodes exact definition. The rejection asserts that on page 7 of applicants' specification, "each node can be one of many types including a link to a folder in a content repository, link to content, ...". The rejection then asserts that on page 12 of Applicants' specification, "A node is generally either an entity defined by unique subject identifier or is a piece of external information defined by a unique subject address that can be resolved with a locator." Applicants respectfully maintain that these statements are not inconsistent. On page 12 of Applicants specification, a node is generally either an entity defined by a unique subject identifier or is a piece of external information defined by a unique subject address that can be resolved with a locator. The sentence uses the term "generally". Therefore, the specification may define other types of nodes and not be inconsistent.”

Page 7 says that nodes are links. Page 12 says that nodes are URLs which are links as well. In addition, page 12 also says that nodes are **generally** either an entity defined by a unique subject identifier or is a piece of external information defined by a unique subject address that can be resolved with a locator. This can be broadly interpreted as links, URLs or the content to which the URLs point. This is also broad enough to read on links to multimedia content that is taught by Hobbs.

Lastly, the applicant argues that the claims are directed to various embodiments in the specification and that the nodes, content repositories, and workflow system

Art Unit: 2165

function together, as well as the functionality is enabled by the specification. These arguments are acknowledged but are not deemed persuasive.

Exactly to which embodiments are the claims directed? Also, the claims are not clear and they do not show the interrelationship between the claimed components. Further clarification is required.

### ***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2165

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnese Johnson whose telephone number is 571-270-1097. The examiner can normally be reached on 4/5/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

14 March 2008

JJ

/Neveen Abel-Jalil/  
Primary Examiner, Art Unit 2165  
March 16, 2008